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October 2, 2003

**VIA FEDEX**

Frank D. Cimino, Esq.  
**TEXAS INSTRUMENTS**  
7839 Churchill Way  
Mail Station 3999  
Dallas, TX 75251

**RE: PROTOCOL APPARATUS WITH EVENT INPUT LEAD**  
Your Ref. No.: T1-4124D  
Our Docket/Invoice No.: 30915.TI

Dear Frank:

In response to your letter dated September 18, 2003, we performed the patentability search, which you requested. The following is a complete report of our search parameters and findings.

**SUBJECT MATTER OF SEARCH**

In our search, we looked for specific limitations in concert with those embodied by the claims of your submitted disclosure. In particular, we looked for an integrated circuit that comprises of functional circuits, a serial data input lead, a serial data output lead, serial scan path of scan registers, a protocol selection memory, an event circuit, an access port and a comparator circuit. Note that our search was limited to finding relevant US patents and foreign publications prior to June 30, 1989.

**REFERENCES DISCOVERED**

5,054,024  
5,001,713  
4,642,561  
4,897,842  
5,109,383

Whetsel  
Whetsel  
Groves et al.  
Herz et al.  
Chujo

5,161,160  
5,051,996  
4,929,889  
4,907,230  
4,872,169  
4,857,835  
4,710,932  
4,752,929  
4,494,066  
4,441,075  
3,826,909  
3,657,527  
3,633,100

Yaguchi et al.  
Bergeson et al.  
Seiler et al.  
Heller et al.  
Whetsel, Jr.  
Whetsel, Jr.  
Hiroshi  
Kantz et al.  
Goel et al.  
McMahon  
Ivashin  
Kassabgi et al.  
Hellwell et al.

#### DISCUSSION OF REFERENCES

Whetsel \*024 discloses a system scan path architecture (See Figures and Claims).

Whetsel \*713 disclose an event qualified testing system and apparatus (See Figures and Claims).

Groves et al. disclose a circuit tester having on-the-fly comparison of actual and expected signals on test pins (See Figures and Abstract).

Herz et al. disclose an integrated circuit signature analyzer system having generator means integrated with the circuits to be tested, connecting means that connect the generator means to receive binary signals from a plurality of nodes in the digital circuit and comparator and storage means for receiving, storing and comparing consecutively-generated signature words (See Claims).

Chujo discloses a scan path circuit (See Figures and Abstract).

The remaining references are cited as of general interest for your review.

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**FIELD OF SEARCH**

**CLASS**

714

**SUBCLASS**

25, 27, 30, 31, 37, 47, 724, 726, 727,  
729, 731, 732, 733, 734, 735, 736,  
744, For. 100, For. 300

In addition to a complete search of the above subclasses, Primary Examiner Stephen Baker of Group 2100 was consulted. This Examiner confirmed our opinion that the most pertinent search areas were covered by the above subclasses.

Enclosed are copies of the cited references and our invoice for services rendered and disbursements for this matter.

In closing, we would like to thank-you for giving us this opportunity to serve you. If there are any questions or comments concerning this search or our services, please contact us at your earliest convenience.

Sincerely,



Tuan Nguyen